

REMARKS/ARGUMENTS

Claims 1, 2, 4-18, and 21-25 are pending in this application. By this Amendment, the drawings, specification, and claim 1 is amended, and claims 24-25 are added. Support for the claims can be found throughout the specification, including the original claims and the drawings. Withdrawal of the rejections in view of the above amendments and the following remarks is respectfully requested.

I. Informalities

The Office Action objects to the drawings under 37 CFR 1.84(p)(5), alleging that reference numeral 330c' referenced in paragraph 50 of the specification is not shown in the drawings. It is respectfully submitted that the amendment to Figure 2 is responsive to the Examiner's comments, and that the drawings meet the requirements of 37 CFR 1.84(p)(5). Accordingly, the objection to the drawings under 37 CFR 1.84(p)(5) should be withdrawn.

The Office Action also objects to the drawings under 37 CFR 1.83(a). It is respectfully submitted that the amendments to claim 1 are responsive to the Examiner's comments regarding the claimed transit tubes. Accordingly, the objection to the drawings under 37 CFR 1.83(a) should be withdrawn.

II. Rejections Under 35 U.S.C. §103(a)

The Office Action rejects claims 1, 4, 5, 8, 9, 14-16, 18, 21 and 22 under 35 U.S.C. §103(a) over U.S. Patent No. 3,066,857 to McCloy in view of either U.S. Patent No. 2,587,246 to

Touborg or U.S. Patent No. 5,059,100 to Quesada et al. (hereinafter "Quesada"). This rejection is respectfully traversed.

Independent claim 1 is directed to a compressor that includes a discharge muffler positioned adjacent to a compression part, and a discharge pipe that extends through a side of the hermetic container. A loop pipe extends from the discharge muffler to the discharge pipe, wherein refrigerant discharged from the discharge muffler flows through the loop pipe and is discharged from the hermetic container through the discharge pipe. The loop pipe includes a plurality of bent portions. At least one transit tube is coupled to an end of the loop pipe. The at least one transit tube surrounds an outer circumferential surface of the end of the loop pipe. McCloy neither discloses nor suggests such features, or the claimed combination of features.

McCloy discloses a compressor unit in which compressed refrigerant passes from a muffler 48 into a discharge conduit 50. The terminal end of the discharge conduit 50 extends directly through the outer wall of the case 10 and to a condenser 52 outside the case 10, without the benefit of a separate, fixed discharge pipe to guide and fix a position of the discharge conduit 50 relative to the case 10. McCloy neither discloses nor suggests any type of discharge pipe that extends through a side of the case 10, as recited in independent claim 1, let alone that the discharge conduit 50 (compared in the Office Action to the claimed loop pipe) extends from the muffler 48 to such a discharge pipe, nor that the refrigerant is discharged through such a discharge pipe, as recited in independent claim 1. Further, McCloy's discharge conduit 50 has a continuously rounded shape, and does not include a plurality of bent portions, as does the

claimed loop pipe. Additionally, as acknowledged in the Office Action, McCloy neither discloses nor suggests the claimed transit tube. Rather, McCloy is combined with either Touborg or Quesada to teach the claimed transit tube. However, Touborg and Quesada each fails to overcome the deficiencies of McCloy.

Touborg discloses a hermetic refrigeration compressor in which fluid enters through a suction line 71 at a top case 21 and into a cylinder head 58 through a suction tube 72. The fluid is compressed in the cylinder head 58 and discharged into a coiled discharge line 73. The fluid is discharged through an outlet line 74 that coupled to a terminal end of the discharge line 73 and extends through a lower case 22. The discharge line 73 forms a single, continuous curve, and does not include a plurality of bent portions, as does the claimed loop pipe.

The Office Action compares the outlet line 74 disclosed by Touborg to the claimed transit tube. If such a comparison is to be drawn, then Touborg clearly neither discloses nor suggests a separate of discharge pipe that extends through a side of the lower case 22, as recited in independent claim 1, let alone that the discharge line 73 (compared in the Office Action to the claimed loop pipe) extends from any type of muffler 48 to such a discharge pipe, nor that the refrigerant is discharged through such a discharge pipe, as recited in independent claim 1. Rather, in this scenario, the discharge line 73, or loop pipe, is coupled only to the outlet line 74, or transit tube, and there is no separate discharge pipe that extends through the case 22.

It is respectfully submitted that, as the outlet line 74 disclosed by Touborg is coupled to the terminal end of the discharge line 73 and extends through the case 22, the outlet line 74 is

more appropriately compared to the claimed discharge pipe, in both structure and function. If the discharge line 73 and the outlet line 74 are compared to the claimed loop pipe and discharge pipe, respectively, then Touborg neither discloses nor suggests any type of transit tube in addition to the discharge line 73 and outlet line 74, as recited in independent claim 1.

Quesada discloses a restraint system for a discharge line 31 of a hermetic compressor 10. Compressed fluid passes from a crankcase 18 into a muffler 40, and then from the muffler 40 into the discharge line 31. The discharge line 31 is secured at an interim position by a clamp 50 fixed to the outer shell 11 of the compressor 10 by a mounting ring 12. A terminal end of the discharge line 31 is coupled to a vertical leg 32 that extends through the outer shell 11. The discharge line 31 forms a single, continuous curve, and does not include a plurality of bent portions, as does the claimed loop pipe.

The Office Action compares the vertical leg 32 disclosed by Quesada to the claimed transit tube. If such a comparison is to be drawn, then Quesada clearly neither discloses nor suggests a separate of discharge pipe that extends through the outer shell 11, as recited in independent claim 1, let alone that the discharge line 31 (compared in the Office Action to the claimed loop pipe) extends from any type of muffler 48 to such a discharge pipe, nor that the fluid is discharged through such a discharge pipe, as recited in independent claim 1. Rather, in this scenario, the discharge line 31, or loop pipe, is coupled only to the vertical leg 32, or transit tube, and there is no separate discharge pipe that extends through the outer shell 11.

It is respectfully submitted that, as the vertical leg 32 disclosed by Quesada is coupled to the terminal end of the discharge line 31 and extends through the outer shell 11, the vertical leg 32 is more appropriately compared to the claimed discharge pipe, in both structure and function. If the discharge line 31 and the vertical leg 32 are compared to the claimed loop pipe and discharge pipe, respectively, then Quesada neither discloses nor suggests any type of transit tube in addition to the discharge line 31 and vertical leg 32, as recited in independent claim 1.

It is noted that the claimed loop pipe, which includes a plurality of bends, provide significant advantages over the comparable components disclosed by McCloy, Tuborg and Quesada. The multiple bends in the claimed loop pipe provide additional flexibility to absorb shock or movement generated by the flow of refrigerant therethrough. These multiple bends also allow the loop pipe to be longer, thus reducing or attenuating any shock or vibration generated due to discharge pressure. This provides for more stable, less noisy operation than that of the devices disclosed by McCloy, Tuborg and Quesada.

Thus, neither McCloy combined with Touborg, nor McCloy combined with Quesada, discloses or suggests the claimed discharge pipe, loop pipe and transit tubes. Accordingly, it is respectfully submitted that independent claim 1 is allowable over the applied combination, and thus the rejection of independent claim 1 under 35 U.S.C. §103(a) over McCloy in view of either Touborg or Quesada should be withdrawn. Dependent claims 4, 5, 8, 9, 14-16, 18, 21 and 22 are allowable at least for the reasons set forth above with respect to independent claim 1, from which they depend, as well as for their added features.

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The Office Action rejects claims 2, 7, 10, 11 and 13 under 35 U.S.C. §103(a) over McCloy in view of either Touborg or Quesada, and further in view of U.S. Patent No. 3,187,996 to Roelsgaard. This rejection is respectfully traversed.

Dependent claims 2, 7, 10, 11 and 13 are allowable over McCloy, Touborg and Quesada, either alone or in combination, at least for the reasons set forth above with respect to independent claim 1, from which they depend, as well as for their added features. Further, Roelsgaard is merely cited as allegedly teaching the use of a synthetic resin, and thus fails to overcome the deficiencies of McCloy, Touborg and Quesada.

Additionally, Roelsgaard discloses a motor M and a compressor C coupled within a capsule 2. A flexible tube 21 directs compressed fluid from a discharge chamber of the compressor C out through a side wall of the capsule 2 and into a muffler 19 positioned outside of the capsule 2. The flexible tube 21 (compared in the Office Action to the claimed loop pipe) extends from the compressor C, through the outer wall of the capsule 2, and into the muffler 19. In contrast, the claimed loop pipe extends from the claimed muffler to the claimed discharge pipe. Thus, it is respectfully submitted that the flexible tube disclosed by Roelsgaard is not appropriately compared to the claimed loop pipe. However, Roelsgaard is merely cited in the Office Action as allegedly teaching the use of a synthetic resin material for such a loop pipe. Roelsgaard discloses that the flexible tube 21 is made of a synthetic material, such as nylon (see column 3/lines 64-67 of Roelsgaard). Roelsgaard does not specifically disclose that the tube 21 is made of a synthetic resin material.

Accordingly, it is respectfully submitted that claims 2, 7, 10, 11 and 13 are allowable over the applied combination, and thus the rejection of claims 2, 7, 10, 11 and 13 under 35 U.S.C. §103(a) over McCloy, Touborg or Quesada, and Roelsgaard should be withdrawn.

The Office Action rejects claim 6 under 35 U.S.C. §103(a) over McCloy in view of either Touborg or Quesada and Roelsgaard, and further in view of U.S. Patent No. 6,152,703 to Yoshimura et al. (hereinafter "Yoshimura"). This rejection is respectfully traversed.

Dependent claim 6 is allowable over McCloy, Touborg and Quesada, either alone or in combination, at least for the reasons set forth above with respect to independent claim 1, from which it depends, as well as for its added features. Further, Roelsgaard is merely cited as allegedly teaching the use of a synthetic resin, and Yoshimura is merely cited as allegedly teaching the use of Teflon. Thus, Roelsgaard and Yoshimura each fails to overcome the deficiencies of McCloy, Touborg and Quesada.

Additionally, Yoshimura discloses that a portion of a suction pipe 200 for a hermetic compressor may be made of Teflon (see column 44/lines 557-58 of Yoshimura). However, it is noted that the claimed Teflon material is used in the claimed loop pipe, and not in a suction pipe of the claimed compressor. Yoshimura's teaching of the use of Teflon in the suction portion of the compressor, which draws in low temperature, low pressure fluid, does not render obvious the use of Teflon in the discharge portion of the compressor. Rather, the high temperature, high pressure environment of the discharge portion of the compressor is significantly different from

that of the suction portion. Thus, it would not have been obvious to apply the teaching of Yoshimura to a more harsh, demanding environment with a reasonable expectation of success.

Accordingly, it is respectfully submitted that claim 6 is allowable over the applied combination, and thus the rejection of claim 6 under 35 U.S.C. §103(a) over McCloy, Touborg or Quesada, Roelsgaard and Yoshimura should be withdrawn.

The Office Action rejects claim 12 under 35 U.S.C. §103(a) over McCloy in view of either Touborg or Quesada, and Roelsgaard and further in view of U.S. Patent No. 4,478,559 to Andrione et al. (hereinafter "Andrione"). This rejection is respectfully traversed.

Dependent claim 12 is allowable over McCloy, Touborg and Quesada, either alone or in combination, at least for the reasons set forth above with respect to independent claim 1, from which it depends, as well as for its added features. Further, Roelsgaard is merely cited as allegedly teaching the use of a synthetic resin, and Andrione is merely cited as allegedly teaching the use of a balance weight. Thus, Roelsgaard and Andrione each fails to overcome the deficiencies of McCloy, Touborg and Quesada. Accordingly, it is respectfully submitted that claim 12 is allowable over the applied combination, and thus the rejection of claim 12 under 35 U.S.C. §103(a) over McCloy, Touborg or Quesada, Roelsgaard and Andrione should be withdrawn.

The Office Action rejects claims 17 and 23 under 35 U.S.C. §103(a) over McCloy in view of either Touborg or Quesada, and further in view of Seo, U.S. Patent Publication No. 2004/0009077. This rejection is respectfully traversed.

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Dependent claims 17 and 23 are allowable over McCloy, Touborg and Quesada, either alone or in combination, at least for the reasons set forth above with respect to independent claim 1, from which they depend, as well as for their added features. Further, Seo is merely cited as allegedly teaching the use of plural mufflers, and thus fails to overcome the deficiencies of McCloy, Touborg and Quesada. Accordingly, it is respectfully submitted that claims 17 and 23 are allowable over the applied combination, and thus the rejection of claims 17 and 23 under 35 U.S.C. §103(a) over McCloy, Touborg or Quesada, and Seo should be withdrawn.

III. New Claims 24-25

New claims 24-25 are added to the application. It is respectfully submitted that new claims 24-25 meet the requirements of 35 U.S.C. §112, and are allowable at least for the reasons set forth above with respect to independent claim 1, from which they depend, as well as for their added features.

IV. Conclusion

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned **Joanna K. Mason**, at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this,

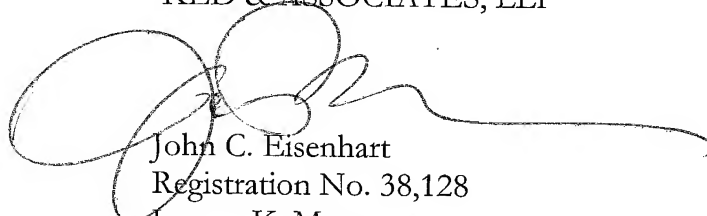
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concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
KED & ASSOCIATES, LLP



John C. Eisenhart
Registration No. 38,128
Joanna K. Mason
Registration No. 56,408

P.O. Box 221200
Chantilly, Virginia 20153-1200
703 766-3777 JCE:JKM:lhd

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